

SEQUENCE LISTING

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Koetting, Oliver

Ritte, Gerhard
Steup, Martin

<120> Plants with reduced activity of a starch phosphorylating enzyme

<130> 65084.000023

<140> Unassigned

<141> 2006-09-01

<150> EP04090088.8

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<170> PatentIn version 3.1

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205

Leu Gln Lys Ser Thr Leu Gly Gly Gln Trp Gln Gly Lys Asp Ala Ser
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Lys Asp Phe Phe Asn Ala Gly Ser Leu Thr Glu Gln Leu Asp Ser Met
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Lys Ile Ser Met Asp Asp Arg Gly Leu Ser Ala Leu Asn Leu Phe Phe
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455

460

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965

970

975

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 1160 1165 1170

Ala Gln Asp Val Glu Gly Cys Leu Val Gly Glu Asp Val Tyr Ile
 1175 1180 1185

Val Gln Ser Arg Pro Gln Pro Leu
 1190 1195

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<213> *Oryza sativa*

<223>

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Gly Gly Arg Pro Arg Arg Gly Leu Val Leu Pro Pro Pro Gly Val Gly
15 20 25

gcg ggt gtg ctg ctc cgc cgg gga gcg atg gcg ctc cct ggg cgg cgc 147
Ala Gly Val Leu Leu Arg Arg Gly Ala Met Ala Leu Pro Gly Arg Arg
30 35 40 45

ggc ttc gcg tgc cgc ggg aga tcc gcg gcc tcg gcg gca gag aga aca 195
Gly Phe Ala Cys Arg Gly Arg Ser Ala Ala Ser Ala Ala Glu Arg Thr
50 55 60

aag gag aaa aag aga aga gat tct tca aag cag cca ttg gtg cat ctc 243
Lys Glu Lys Lys Arg Arg Asp Ser Ser Lys Gln Pro Leu Val His Leu
65 70 75

cag gtt tgt cta gag cac cag gtt aag ttt ggt gag cat gta ggc att 291
 Gln Val Cys Leu Glu His Gln Val Lys Phe Gly Glu His Val Gly Ile
 80 85 90

atc ggt tcc aca aag gag ctt ggt tca tgg gag gag cag gtt gaa ctg 339
Ile Gly Ser Thr Lys Glu Leu Gly Ser Trp Glu Glu Gln Val Glu Leu
95 100 105

gaa tgg act aca aat ggt tgg gtc tgc cag ctt aag ctc cct gga gaa 387
Glu Trp Thr Thr Asn Gly Trp Val Cys Gln Leu Lys Leu Pro Gly Glu
110 115 120 125

aca ctt gtg gag ttt aaa ttt gtt ata ttt ttg gtg gga gga aaa gat 435
Thr Leu Val Glu Phe Lys Phe Val Ile Phe Leu Val Gly Gly Lys Asp
130 135 140

aaa ata tgg gaa gat ggt aat aac cgt gtt gtt gag ctg ccg aag gat 483
Lys Ile Trp Glu Asp Gly Asn Asn Arg Val Val Glu Leu Pro Lys Asp
145 150 155

ggt aag ttt gat ata gta tgc cac tgg aat aga aca gaa gag cca tta 531
Gly Lys Phe Asp Ile Val Cys His Trp Asn Arg Thr Glu Glu Pro Leu
160 165 170

gaa ctt tta gga aca cca aag ttt gag ttg gtc gga gaa gct gaa aag Glu Leu Leu Gly Thr Pro Lys Phe Glu Leu Val Gly Glu Ala Glu Lys 175 180 185	579
aat act ggc gag gat gct tca gca tct gta act ttt gca cct gaa aaa Asn Thr Gly Glu Asp Ala Ser Ala Ser Val Thr Phe Ala Pro Glu Lys 190 195 200 205	627
gtt caa gat att tca gtt gtt gag aat ggt gat cca gca cca gag gcc Val Gln Asp Ile Ser Val Val Glu Asn Gly Asp Pro Ala Pro Glu Ala 210 215 220	675
gag tca agc aaa ttt ggt ggg caa tgg caa gga agt aaa act gtt ttc Glu Ser Ser Lys Phe Gly Gly Gln Trp 230 Glu Ser Lys Thr Val Phe 225 235	723
atg aga tca aat gag cat ctg aat aag gag gct gat agg atg tgg gat Met Arg Ser Asn Glu His Leu Asn Lys Glu Ala Asp Arg Met Trp Asp 240 245 250	771
aca act ggg ctt gat gga ata gca ctg aaa ctg gtg gag ggc gat aaa Thr Thr Gly Leu Asp Gly Ile Ala Leu Lys Leu Val Glu Gly Asp Lys 255 260 265	819
gca tcc agg aac tgg tgg cgg aag tta gag gtt gtt cgc ggg ata ttg Ala Ser Arg Asn Trp Trp Arg Lys Leu Glu Val Val Arg Gly Ile Leu 270 275 280 285	867
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gct att tat ctg aag tgg att tat aca ggt cag ata tcg tgc ttt gaa Ala Ile Tyr Leu Lys Trp Ile Tyr Thr Gly Gln Ile Ser Cys Phe Glu 305 310 315	963
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act ata caa aac aaa ctt cat cgt aat gct gga cct gag gat ctt att Thr Ile Gln Asn Lys Leu His Arg Asn Ala Gly Pro Glu Asp Leu Ile 400 405 410	1251
gct aca gaa gtc atg ctt gct agg att act aag acc cct gga gaa tac Ala Thr Glu Val Met Leu Ala Arg Ile Thr Lys Thr Pro Gly Glu Tyr 415 420 425	1299

agt Ser 430	gaa Glu	aca Thr	ttt Phe	gtt Val	gaa Glu 435	caa Gln	ttc Phe	acg Thr	ata Ile	ttt Phe 440	tat Tyr	agc Ser	gaa Glu	cta Leu	aaa Lys 445	1347
gat Asp	ttc Phe	ttc Phe	aat Asn	gct Ala 450	ggc Gly	agc Ser	cta Leu	ttt Phe	gag Glu 455	caa Gln	ctg Leu	gag Glu	tcc Ser	atc Ile 460	aag Lys	1395
gaa Glu	tct Ser	ctg Leu	aac Asn 465	gag Glu	tca Ser	ggc Gly	tta Leu	gaa Glu 470	gtt Val	ctc Leu	tca Ser	tcc Ser	ttt Phe 475	gtg Val	gaa Glu	1443
acc Thr	aaa Lys	agg Arg 480	agt Ser	ttg Leu	gac Asp	caa Gln	gtg Val 485	gat Asp	cat His	gca Ala	gaa Glu	gat Asp 490	ttg Leu	gat Asp	aaa Lys	1491
aat Asn 495	gat Asp	acc Thr	att Ile	caa Gln	att Ile	ttg Leu 500	atg Met	act Thr	acc Thr	ttg Leu 505	caa Gln	tca Ser	tta Leu	tct Ser	tct Ser	1539
cta Leu 510	aga Arg	tcg Ser	gtt Val	cta Leu	atg Met 515	aag Lys	ggc Gly	ctt Leu	gaa Glu	agt Ser 520	ggc Gly	ctt Leu	aga Arg	aat Asn	gat Asp 525	1587
gcg Ala	cct Pro	gat Asp	aat Asn	gct Ala 530	ata Ile	gca Ala	atg Met	cga Arg	caa Gln 535	aag Lys	tgg Trp	cgc Arg	ctt Leu	tgt Cys 540	gaa Glu	1635
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act Thr	ctt Leu	gaa Glu 560	gcc Ala	tta Leu	ggc Gly	gga Gly	tca Ser 565	gct Ala	tca Ser	ctt Leu	gca Ala	aag Lys 570	gat Asp	gta Val	gct Ala	1731
aga Arg 575	aat Asn	act Thr	act Thr	cta Leu	tgg Trp	gat Asp 580	act Thr	act Thr	ctt Leu	gat Asp	gcc Ala 585	ctt Leu	gtc Val	att Ile	ggc Gly	1779
atc Ile 590	aat Asn	caa Gln	gtt Val	agc Ser	ttt Phe 595	tca Ser	ggc Gly	tgg Trp	aaa Lys	aca Thr 600	gat Asp	gaa Glu	tgt Cys	att Ile	gcc Ala 605	1827
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gaa Glu	ggc Gly	tgt Cys	gaa Glu 625	gat Asp	ggg Gly	aaa Lys	tat Tyr	att Ile 630	tgg Trp	tca Ser	cta Leu	aga Arg	ctt Leu 635	aaa Lys	gct Ala	1923
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ctt Leu	tct Ser 655	ata Ile	ttc Phe	cct Pro	gaa Glu	aaa Lys 660	gta Val	atg Met	gtt Val	att Ile	ggg Gly 665	aaa Lys	gcc Ala	ctt Leu	gga Gly	2019
ata Ile 670	cca Pro	gat Asp	aac Asn	agt Ser	gtg Val 675	aga Arg	act Thr	tac Tyr	aca Thr	gag Glu 680	gca Ala	gaa Glu	att Ile	cgt Arg	gct Ala 685	2067

ggc att gtt ttt cag gta tct aaa cta tgc aca gta ctt cag aaa gca Gly Ile Val Phe Gln Val Ser Lys Leu Cys Thr Val Leu Gln Lys Ala 690 700	2115
att cga gaa gta ctt gga tca act ggc tgg gat gtt ctt gtt cct gga Ile Arg Glu Val Leu Gly Ser Thr Gly Trp Asp Val Leu Val Pro Gly 705 710 715	2163
gtg gcc cat gga act ctg atg cgg gtg gaa aga att ctt cct gga tca Val Ala His Gly Thr Leu Met Arg Val Glu Arg Ile Leu Pro Gly Ser 720 725 730	2211
tta cct tca tct gtc aaa gaa cct gtg gtt cta att gta gat aag gct Leu Pro Ser Ser Val Lys Glu Pro Val Val Leu Ile Val Asp Lys Ala 735 740 745	2259
gat gga gat gaa gag gtc aaa gct gct ggg gat aat ata gtt ggt gtt Asp Gly Asp Glu Glu Val Lys Ala Ala Gly Asp Asn Ile Val Gly Val 750 755 760 765	2307
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cgt caa gag aat gtt gta ttt gta act tgt gaa tat gat gac aca gtt Arg Gln Glu Asn Val Val Phe Val Thr Cys Glu Tyr Asp Asp Thr Val 785 790 795	2403
aca gat gtg tat ttg ctt gag gga aaa tat atc aga tta gaa gca tca Thr Asp Val Tyr Leu Leu Glu Gly Lys Tyr Ile Arg Leu Glu Ala Ser 800 805 810	2451
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gtc tct aca gaa cca aat agt aca ggg aat cca ttt caa cag aaa ctc Val Ser Thr Glu Pro Asn Ser Thr Gly Asn Pro Phe Gln Gln Lys Leu 830 835 840 845	2547
caa aat gaa ttc tct cta cca tcg gat atc gag atg cca ctg caa atg Gln Asn Glu Phe Ser Leu Pro Ser Asp Ile Glu Met Pro Leu Gln Met 850 855 860	2595
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gag ctt tca gaa gct tca gtg gaa tca gct ggt gca aaa gct gct gca Glu Leu Ser Glu Ala Ser Val Glu Ser Ala Gly Ala Lys Ala Ala Ala 880 885 890	2691
tgc aga act ctt tct gtt ctt gct tca ttg tct aat aaa gtc tat agt Cys Arg Thr Leu Ser Val Leu Ala Ser Leu Ser Asn Lys Val Tyr Ser 895 900 905	2739
gat caa gga gtt cca gca gcc ttt aga gtc cct tct ggt gct gtg ata Asp Gln Gly Val Pro Ala Ala Phe Arg Val Pro Ser Gly Ala Val Ile 910 915 920 925	2787
cca ttt gga tca atg gag gat gcg ctc aag aaa agt gga tca ctg gaa Pro Phe Gly Ser Met Glu Asp Ala Leu Lys Lys Ser Gly Ser Leu Glu 930 935 940	2835

tec ttt aca agc ctt cta gaa aag att gaa aca gcc aaa gtc gaa aat	2883
Ser Phe Thr Ser 945 Leu Leu Glu Lys 950 Ile Glu Thr Ala Lys 955 Val Glu Asn	
ggt gaa gtt gat agc ctg gcg ttg gag cta caa gca ata att tca cat	2931
Gly Glu Val Asp Ser Leu Ala Leu Glu Leu Gln Ala Ile Ile Ser His	
960 965 970	
ctt tcc cca ccg gag gag act att ata ttt ctc aaa aga atc ttc cca	2979
Leu Ser Pro Pro Glu Glu Thr Ile Ile Phe Leu Lys Arg Ile Phe Pro	
975 980 985	
cag gat gtc cgg ttg att gtt aga tct agt gct aat gtg gag gat ttg	3027
Gln Asp Val Arg Leu 995 Ile Val Arg Ser Ser 1000 Asn Val Glu Asp Leu	
990 1005	
gct ggt atg tca gct gct ggt ctc tat gat tca att ccc aat gtc	3072
Ala Gly Met Ser Ala 1010 Ala Gly Leu Tyr Asp 1015 Ser Ile Pro Asn Val	
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Ser Leu Met Asp Pro 1025 Cys Ala Phe Gly Ala 1030 Ala Val Gly Lys Val	
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Trp Ala Ser Leu Tyr 1040 Thr Arg Arg Ala Ile 1045 Leu Ser Arg Arg Ala	
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Ala Gly Val Tyr Gln 1055 Arg Asp Ala Thr Met 1060 Ala Val Leu Val Gln	
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gaa ata ctg cag cca gat ctc tcc ttc gtg ctt cat act gtt tgc	3252
Glu Ile Leu Gln Pro 1070 Asp Leu Ser Phe Val 1075 Leu His Thr Val Cys	
1080	
ccc gct gac cat gac ccc aag gtt gtc cag gct gag gtc gcc cct	3297
Pro Ala Asp His Asp 1085 Pro Lys Val Val Gln 1090 Ala Glu Val Ala Pro	
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ggg ctg ggt gaa acg ctt gct tca gga acc cgt ggc acc ccg tgg	3342
Gly Leu Gly Glu Thr 1100 Leu Ala Ser Gly Thr 1105 Arg Gly Thr Pro Trp	
1110	
agg ctg tca tgt aac aaa ttc gat gga aaa gtt gcc act ctt gcc	3387
Arg Leu Ser Cys Asn 1115 Lys Phe Asp Gly Lys 1120 Val Ala Thr Leu Ala	
1125	
ttt tca aat ttc agt gag gag atg gtg gtg cac aac tct ggt cct	3432
Phe Ser Asn Phe Ser 1130 Glu Glu Met Val Val 1135 His Asn Ser Gly Pro	
1140	
gcc aat gga gaa gta att cgt ctt act gtt gat tac agc aag aag	3477
Ala Asn Gly Glu Val 1145 Ile Arg Leu Thr Val 1150 Asp Tyr Ser Lys Lys	
1155	
cca ttg tcg gtt gat aca acc ttt agg aag cag ttt ggt cag cga	3522
Pro Leu Ser Val Asp 1160 Thr Thr Phe Arg Lys 1165 Gln Phe Gly Gln Arg	
1170	
ctg gct gcg att ggc cag tat ctg gag cag aag ttc ggg agt gca	3567
Leu Ala Ala Ile Gly 1175 Gln Tyr Leu Glu Gln 1180 Lys Phe Gly Ser Ala	
1185	

cag gat gtg gaa ggt tgc ctg gtt ggg aaa gat att ttt ata gtg 3612
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<212> PRT

<213> Oryza sativa

<400> 4

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 20 25 30

Leu Leu Arg Arg Gly Ala Met Ala Leu Pro Gly Arg Arg Gly Phe Ala
 35 40 45

Cys Arg Gly Arg Ser Ala Ala Ser Ala Ala Glu Arg Thr Lys Glu Lys
 50 55 60

Lys Arg Arg Asp Ser Ser Lys Gln Pro Leu Val His Leu Gln Val Cys
 65 70 75 80

Leu Glu His Gln Val Lys Phe Gly Glu His Val Gly Ile Ile Gly Ser
 85 90 95

Thr Lys Glu Leu Gly Ser Trp Glu Glu Gln Val Glu Leu Glu Trp Thr
 100 105 110

Thr Asn Gly Trp Val Cys Gln Leu Lys Leu Pro Gly Glu Thr Leu Val
 115 120 125

Glu Phe Lys Phe Val Ile Phe Leu Val Gly Gly Lys Asp Lys Ile Trp
 130 135 140

Glu Asp Gly Asn Asn Arg Val Val Glu Leu Pro Lys Asp Gly Lys Phe
 145 150 155 160

Asp Ile Val Cys His Trp Asn Arg Thr Glu Glu Pro Leu Glu Leu Leu
 165 170 175

Gly Thr Pro Lys Phe Glu Leu Val Gly Glu Ala Glu Lys Asn Thr Gly
 180 185 190

Glu Asp Ala Ser Ala Ser Val Thr Phe Ala Pro Glu Lys Val Gln Asp
 195 200 205

Ile Ser Val Val Glu Asn Gly Asp Pro Ala Pro Glu Ala Glu Ser Ser
 210 215 220

Lys Phe Gly Gly Gln Trp Gln Gly Ser Lys Thr Val Phe Met Arg Ser
 225 230 235 240

Asn Glu His Leu Asn Lys Glu Ala Asp Arg Met Trp Asp Thr Thr Gly
 245 250 255

Leu Asp Gly Ile Ala Leu Lys Leu Val Glu Gly Asp Lys Ala Ser Arg
 260 265 270

Asn Trp Trp Arg Lys Leu Glu Val Val Arg Gly Ile Leu Ser Glu Ser
 275 280 285

Phe Asp Asp Gln Ser Arg Leu Gly Ala Leu Val Tyr Ser Ala Ile Tyr
 290 295 300

Leu Lys Trp Ile Tyr Thr Gly Gln Ile Ser Cys Phe Glu Asp Gly Gly
 305 310 315 320

His His Arg Pro Asn Lys His Ala Glu Ile Ser Arg Gln Ile Phe Arg
 325 330 335

Glu Leu Glu Met Met Tyr Tyr Gly Lys Thr Thr Ser Ala Lys Asp Val
 340 345 350

Leu Val Ile Arg Lys Ile His Pro Phe Leu Pro Ser Phe Lys Ser Glu
 355 360 365

Phe Thr Ala Ser Val Pro Leu Thr Arg Ile Arg Asp Ile Ala His Arg
 370 375 380

Asn Asp Ile Pro His Asp Leu Lys Gln Glu Ile Lys His Thr Ile Gln
 385 390 395 400

Asn Lys Leu His Arg Asn Ala Gly Pro Glu Asp Leu Ile Ala Thr Glu
 405 410 415

Val Met Leu Ala Arg Ile Thr Lys Thr Pro Gly Glu Tyr Ser Glu Thr
 420 425 430

Phe Val Glu Gln Phe Thr Ile Phe Tyr Ser Glu Leu Lys Asp Phe Phe
 435 440 445

Asn Ala Gly Ser Leu Phe Glu Gln Leu Glu Ser Ile Lys Glu Ser Leu
 450 455 460

Asn Glu Ser Gly Leu Glu Val Leu Ser Ser Phe Val Glu Thr Lys Arg
 465 470 475 480

Ser Leu Asp Gln Val Asp His Ala Glu Asp Leu Asp Lys Asn Asp Thr
 485 490 495

Ile Gln Ile Leu Met Thr Thr Leu Gln Ser Leu Ser Ser Leu Arg Ser
 500 505 510

Val Leu Met Lys Gly Leu Glu Ser Gly Leu Arg Asn Asp Ala Pro Asp
 515 520 525

Asn Ala Ile Ala Met Arg Gln Lys Trp Arg Leu Cys Glu Ile Ser Leu
 530 535 540

Glu Asp Tyr Ser Phe Val Leu Leu Ser Arg Phe Ile Asn Thr Leu Glu
 545 550 555 560

Ala Leu Gly Gly Ser Ala Ser Leu Ala Lys Asp Val Ala Arg Asn Thr
 565 570 575

Thr Leu Trp Asp Thr Thr Leu Asp Ala Leu Val Ile Gly Ile Asn Gln
 580 585 590

Val Ser Phe Ser Gly Trp Lys Thr Asp Glu Cys Ile Ala Ile Gly Asn
 595 600 605

Glu Ile Leu Ser Trp Lys Gln Lys Gly Leu Ser Glu Ser Glu Gly Cys
 610 615 620

Glu Asp Gly Lys Tyr Ile Trp Ser Leu Arg Leu Lys Ala Thr Leu Asp
 625 630 635 640

Arg Ala Arg Arg Leu Thr Glu Glu Tyr Ser Glu Ala Leu Leu Ser Ile
 645 650 655

Phe Pro Glu Lys Val Met Val Ile Gly Lys Ala Leu Gly Ile Pro Asp
 660 665 670

Asn Ser Val Arg Thr Tyr Thr Glu Ala Glu Ile Arg Ala Gly Ile Val
 675 680 685

Phe Gln Val Ser Lys Leu Cys Thr Val Leu Gln Lys Ala Ile Arg Glu
690 695 700
Val Leu Gly Ser Thr Gly Trp Asp Val Leu Val Pro Gly Val Ala His
705 710 715 720
Gly Thr Leu Met Arg Val Glu Arg Ile Leu Pro Gly Ser Leu Pro Ser
725 730 735
Ser Val Lys Glu Pro Val Val Leu Ile Val Asp Lys Ala Asp Gly Asp
740 745 750
Glu Glu Val Lys Ala Ala Gly Asp Asn Ile Val Gly Val Ile Leu Leu
755 760 765
Gln Glu Leu Pro His Leu Ser His Leu Gly Val Arg Ala Arg Gln Glu
770 775 780
Asn Val Val Phe Val Thr Cys Glu Tyr Asp Asp Thr Val Thr Asp Val
785 790 795 800
Tyr Leu Leu Glu Gly Lys Tyr Ile Arg Leu Glu Ala Ser Ser Ile Asn
805 810 815
Val Asn Leu Ser Ile Val Ser Glu Lys Asn Asp Asn Ala Val Ser Thr
820 825 830
Glu Pro Asn Ser Thr Gly Asn Pro Phe Gln Gln Lys Leu Gln Asn Glu
835 840 845
Phe Ser Leu Pro Ser Asp Ile Glu Met Pro Leu Gln Met Ser Lys Gln
850 855 860
Lys Ser Lys Ser Gly Val Asn Gly Ser Phe Ala Ala Leu Glu Leu Ser
865 870 875 880
Glu Ala Ser Val Glu Ser Ala Gly Ala Lys Ala Ala Ala Cys Arg Thr
885 890 895
Leu Ser Val Leu Ala Ser Leu Ser Asn Lys Val Tyr Ser Asp Gln Gly
900 905 910
Val Pro Ala Ala Phe Arg Val Pro Ser Gly Ala Val Ile Pro Phe Gly
915 920 925
Ser Met Glu Asp Ala Leu Lys Lys Ser Gly Ser Leu Glu Ser Phe Thr
930 935 940

Ser Leu Leu Glu Lys Ile Glu Thr Ala Lys Val Glu Asn Gly Glu Val
 945 950 955 960

Asp Ser Leu Ala Leu Glu Leu Gln Ala Ile Ile Ser His Leu Ser Pro
 965 970 975

Pro Glu Glu Thr Ile Ile Phe Leu Lys Arg Ile Phe Pro Gln Asp Val
 980 985 990

Arg Leu Ile Val Arg Ser Ser Ala Asn Val Glu Asp Leu Ala Gly Met
 995 1000 1005

Ser Ala Ala Gly Leu Tyr Asp Ser Ile Pro Asn Val Ser Leu Met
 1010 1015 1020

Asp Pro Cys Ala Phe Gly Ala Ala Val Gly Lys Val Trp Ala Ser
 1025 1030 1035

Leu Tyr Thr Arg Arg Ala Ile Leu Ser Arg Arg Ala Ala Gly Val
 1040 1045 1050

Tyr Gln Arg Asp Ala Thr Met Ala Val Leu Val Gln Glu Ile Leu
 1055 1060 1065

Gln Pro Asp Leu Ser Phe Val Leu His Thr Val Cys Pro Ala Asp
 1070 1075 1080

His Asp Pro Lys Val Val Gln Ala Glu Val Ala Pro Gly Leu Gly
 1085 1090 1095

Glu Thr Leu Ala Ser Gly Thr Arg Gly Thr Pro Trp Arg Leu Ser
 1100 1105 1110

Cys Asn Lys Phe Asp Gly Lys Val Ala Thr Leu Ala Phe Ser Asn
 1115 1120 1125

Phe Ser Glu Glu Met Val Val His Asn Ser Gly Pro Ala Asn Gly
 1130 1135 1140

Glu Val Ile Arg Leu Thr Val Asp Tyr Ser Lys Lys Pro Leu Ser
 1145 1150 1155

Val Asp Thr Thr Phe Arg Lys Gln Phe Gly Gln Arg Leu Ala Ala
 1160 1165 1170

Ile Gly Gln Tyr Leu Glu Gln Lys Phe Gly Ser Ala Gln Asp Val
 1175 1180 1185

Glu Gly Cys Leu Val Gly Lys Asp Ile Phe Ile Val Gln Ser Arg
1190 1195 1200

Pro Gln Pro
1205

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<211> 12

<212> PRT

<213> *Oryza sativa*, *Arabidopsis thaliana*

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1 5 10

<210> 6

<211> 9

<212> PRT

<213> *Solanum tuberosum*

<400> 6

Pro Glu Glu Cys Lys Ala Val Gly Asn
1 5

<210> 7

<211> 7

<212> PRT

<213> *Solanum tuberosum*

<400> 7

Thr Glu Glu Tyr Ser Glu Thr
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<210> 8

<211> 7

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Arg Phe Val Asn Ala Val Glu
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<213> solanum tuberosum

Glu Gly Ser Glu Asp Gly Lys
1 5

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<223>

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Ala Asp Ala Ser Ile Ala Met Arg Gln Lys Trp Arg Leu Cys Glu Ile
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ggg ctt gaa gac tat gca ttt gtt ctt ttg agc agg ttt gtg aat gca 96
Gly Leu Glu Asp Tyr Ala Phe Val Leu Leu Ser Arg Phe Val Asn Ala
20 25 30

ggt gaa gct cta ggc gga gct gat tgg ctt gca gag aat gta aca gtg 144
Val Glu Ala Leu Gly Gly Ala Asp Trp Leu Ala Glu Asn Val Thr Val
35 40 45

aaa aac att agt tct tgg aat gat cca att gga gca ctt aca gtt gga 192
Lys Asn Ile Ser Ser Trp Asn Asp Pro Ile Gly Ala Leu Thr Val Gly
50 55 60

atc caa cag cta ggt ata tct ggt tgg aag ccc gag gaa tgc aaa gct 240
Ile Gln Gln Leu Gly Ile Ser Gly Trp Lys Pro Glu Glu Cys Lys Ala

65	70	75	80	
gtt gga aat gaa ctt ttg tca tgg aaa gaa agg ggt att tca gaa att				288
Val Gly Asn Glu Leu Leu Ser Trp Lys Glu Arg Gly Ile Ser Glu Ile	85	90	95	
gaa ggc agc gaa gat ggt aag act ata tgg gca tta aga cta aaa gcg				336
Glu Gly Ser Glu Asp Gly Lys Thr Ile Trp Ala Leu Arg Leu Lys Ala	100	105	110	
act ctt gat aga agt cga agg tta act gag gag tat tcc gag aca ctt				384
Thr Leu Asp Arg Ser Arg Arg Leu Thr Glu Glu Tyr Ser Glu Thr Leu	115	120	125	
ctc caa ata ttc cct gaa a				403
Leu Gln Ile Phe Pro Glu	130			

<210> 11

<211> 134

<212> PRT

<213> Solanum tuberosum

<400> 11

Ala Asp Ala Ser Ile Ala Met Arg Gln Lys Trp Arg Leu Cys Glu Ile	1	5	10	15
Gly Leu Glu Asp Tyr Ala Phe Val Leu Leu Ser Arg Phe Val Asn Ala	20	25	30	
Val Glu Ala Leu Gly Gly Ala Asp Trp Leu Ala Glu Asn Val Thr Val	35	40	45	
Lys Asn Ile Ser Ser Trp Asn Asp Pro Ile Gly Ala Leu Thr Val Gly	50	55	60	
Ile Gln Gln Leu Gly Ile Ser Gly Trp Lys Pro Glu Glu Cys Lys Ala	65	70	75	80
Val Gly Asn Glu Leu Leu Ser Trp Lys Glu Arg Gly Ile Ser Glu Ile	85	90	95	
Glu Gly Ser Glu Asp Gly Lys Thr Ile Trp Ala Leu Arg Leu Lys Ala	100	105	110	
Thr Leu Asp Arg Ser Arg Arg Leu Thr Glu Glu Tyr Ser Glu Thr Leu	115	120	125	
Leu Gln Ile Phe Pro Glu				

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